

# Claims

- [c1] A method of controlling an automotive vehicle comprising:  
detecting a parking mode;  
in the parking mode, applying brake-steer at a first wheel to reduce a vehicle turning radius;  
simultaneously with the step of applying brake-steer, increasing the normal load on at least one of the wheels.
- [c2] A method as recited in claim 1 wherein the at least one of the wheels comprises a rear wheel.
- [c3] A method as recited in claim 1 wherein the at least one of the wheels comprises a rear inside wheel relative to a turn.
- [c4] A method as recited in claim 1 wherein detecting a parking mode comprises detecting a parking mode in response to a vehicle speed.
- [c5] A method as recited in claim 1 wherein detecting a parking mode comprises detecting a parking mode in response to a steering wheel angle.
- [c6] A method as recited in claim 1 wherein detecting a park-

ing mode comprises detecting a parking mode in response to a vehicle speed and a steering angle.

- [c7] A method as recited in claim 1 wherein detecting a parking mode comprises detecting a parking mode in response to a driver-actuated switch.
- [c8] A method as recited in claim 1 wherein the step of applying brake-steer comprises applying a first brake.
- [c9] A method as recited in claim 1 wherein the step of applying brake-steer comprises applying a first brake and a second brake to reduce the turning radius of the vehicle.
- [c10] A method as recited in claim 1 wherein applying brake-steer comprises applying at least one brake at a first wheel to reduce a vehicle turning radius.
- [c11] A method as recited in claim 1 wherein applying brake-steer comprises applying an increased drive torque to a second wheel relative to a first wheel.
- [c12] A method as recited in claim 1 wherein increasing the normal load comprises controlling an active suspension.
- [c13] A method as recited in claim 1 wherein increasing the normal load comprises controlling an air suspension.

- [c14] A system of controlling an automotive vehicle having a plurality of brakes comprising:  
means to detect a parking mode; and  
a controller programmed to apply brake-steer to at least a first wheel in the parking mode, and to increase a normal load on a wheel to reduce a vehicle turning radius.
- [c15] A method as recited in claim 14 wherein the wheel comprises a rear wheel.
- [c16] A method as recited in claim 14 wherein the at least one of the wheels comprises a rear inside wheel relative to a turn.
- [c17] A system as recited in claim 14 further comprising an active suspension, said controller increasing the normal load by changing the active suspension.
- [c18] A system as recited in claim 14 wherein said means to detect a parking mode comprises a vehicle speed sensor.
- [c19] A system as recited in claim 14 wherein said means to detect a parking mode comprises a steering wheel angle sensor.
- [c20] A system as recited in claim 14 wherein said means to detect a parking mode comprises a vehicle speed sensor and a steering wheel angle sensor.

- [c21] A system as recited in claim 14 wherein said means to detect a parking mode comprises a driver-actuated switch.
- [c22] A system as recited in claim 14 wherein said controller is programmed to brake-steer by applying a first brake and a second brake to reduce the turning radius of the vehicle.
- [c23] A system as recited in claim 14 wherein said controller is programmed to apply brake-steer by applying at least one brake at a first wheel to reduce a vehicle turning radius.
- [c24] A system as recited in claim 14 wherein said controller is programmed to apply brake-steer by applying an increased drive torque to a second wheel relative to the first wheel.
- [c25] A method of controlling an automotive vehicle comprising:  
detecting a parking mode;  
detecting a vehicle loading condition; and  
applying brake-steer to the vehicle wheels in response to the parking mode and the vehicle loading condition.
- [c26] A method as recited in claim 25 wherein applying brake-

steer comprises applying at least one brake at a first wheel to reduce a vehicle turning radius.

- [c27] A method as recited in claim 25 wherein applying brake-steer comprises applying an increased drive torque to a second wheel relative to the first wheel.
- [c28] A method as recited in claim 25 applying brake-steer comprises increasing the normal load on the rear wheels.
- [c29] A method as recited in claim 25 wherein detecting a normal load condition comprises determining a loading response to a wheel speed and throttle signal.
- [c30] A method as recited in claim 25 wherein detecting a parking mode comprises detecting a parking mode in response to a vehicle speed.
- [c31] A method as recited in claim 25 wherein detecting a parking mode comprises detecting a parking mode in response to a steering wheel angle.
- [c32] A method as recited in claim 25 wherein detecting a parking mode comprises detecting a parking mode in response to a vehicle speed and a steering angle.
- [c33] A method as recited in claim 25 wherein detecting a parking mode comprises detecting a parking mode in response to a driver-actuated switch.

- [c34] A method of controlling an automotive vehicle comprising:  
detecting a parking mode;  
in the parking mode, applying at least one brake at a first wheel to reduce a vehicle turning radius;  
simultaneously with the step of applying at least one brake, applying drive torque to a second wheel; and  
increasing the normal load on the rear wheels.
- [c35] A method as recited in claim 34 wherein increasing the normal load comprises controlling an active suspension.
- [c36] A method as recited in claim 34 wherein increasing the normal load comprises controlling an air suspension.
- [c37] A method as recited in claim 34 wherein detecting a parking mode comprises detecting a parking mode in response to a vehicle speed.
- [c38] A method as recited in claim 34 wherein detecting a parking mode comprises detecting a parking mode in response to a steering wheel angle.
- [c39] A method as recited in claim 34 wherein detecting a parking mode comprises detecting a parking mode in response to a vehicle speed and a steering angle.
- [c40] A method as recited in claim 34 wherein detecting a

parking mode comprises detecting a parking mode in response to a driver-actuated switch.

- [c41] A system for controlling an automotive vehicle having a brake system comprising:
  - means to detect a parking mode;
  - means to determine a vehicle loading condition; and
  - a controller coupled to the means to detect a parking mode and the means to determine a vehicle loading condition, said controller applying brake-steer to the vehicle wheels in response to the parking mode and the vehicle loading condition.
- [c42] A system as recited in claim 41 wherein said means to detect a parking mode comprises a vehicle speed sensor.
- [c43] A system as recited in claim 41 wherein said means to detect a parking mode comprises a steering wheel angle sensor.
- [c44] A system as recited in claim 41 wherein said means to detect a parking mode comprises a vehicle speed sensor and a steering wheel angle sensor.
- [c45] A system as recited in claim 41 wherein said means to detect a parking mode comprises a driver-actuated switch.

- [c46] A system as recited in claim 41 wherein said means to determine a loading condition comprises a yaw stability control system.
- [c47] A system as recited in claim 41 wherein said means to determine a loading condition comprises a load sensor.
- [c48] A system as recited in claim 41 wherein said means to determine a loading condition comprises a plurality of wheel speed sensors and a throttle sensor.
- [c49] A system as recited in claim 41 wherein said means to determine a loading condition comprises a suspension height sensor.